Healthcare Case Study

MCG Global Services spearheaded an 18-month information management initiative—with an Enterprise Data Warehouse as the centerpiece—of a Fortune 500 healthcare company. The project strategically targeted improving the analytical capability and maturity of its claims processing division that handles upwards of 4 million medical claims a month.

Background

A leading healthcare company acquired an Enterprise Data Warehouse appliance. Realizing their need of help in the implementation of this platform, the company selected McKnight Consulting Group Global Services to accelerate analytical value for their business and leverage it to improve its ability to make data-driven decisions. The company also chose claims processing as a starting point to build out the EDW, due to its importance to a wide number of stakeholders and impact on the bottom line.

They desired self-service business intelligence capability with more user-friendly and enriched reports and dashboards, transitioning away from static reporting in silos to interactive analytics across the organization. They wanted to utilize this capability to be able to drill through to details behind the numbers and have alerts to identify sub-par service levels and focus on expedited action. The client also desired rapid adoption for more informed decision-making and reduce the demand on a high-turnover analytic team and improve service to internal data consumers.

> *"I really enjoyed and appreciated all the work and guidance you and your team provided. They were awesome and just who we needed!"* –Project Sponsor

What we did

- **Architected and built an Enterprise Data Warehouse from the ground up** on Netezza (IBM PureData System for Analytics), leveraged the IBM Unified Data Model for Healthcare, integrated data daily and bringing in over 350 million claims using DataStage

- **Led a blended development team** (split between data integration and BI) of 12 and successfully instituted best practices as repeatable processes, transferred knowledge, scaled back our presence (as the client's maturity increased)

- **Built a claims operations executive dashboard and self-service business intelligence interface** for business analysts on the Microsoft BI stack

- **Led the data governance forum** with representatives from corporate and all their operations states and wrote their business glossary

- **Conducted multiple data science analytical models** to predict automated claims processing failures and incurred interest payments—also designing an advanced analytics risk modeling course to train the client's senior analysts and reporting teams

Focal impact areas

Our work had numerous impacts and positive measured outcomes that contributed to key company performance improvement initiatives:

- **Developed an executive dashboard of key operational performance metrics**. We developed a dashboard that tracked daily changes in key metrics, permitting the early and easy detection of abnormal or unexpected readings outside specific, self-adapting thresholds.

- **End-to-end analytics of the entire claims lifecycle**. We leveraged the full capability of the unified data model and extended the EDW's reach with a data federation tool to construct the company's first complete service-to-pay-and-beyond view of claims.

- **Interest payment reduction and penalty risk analytics**. Leveraging the claims lifecycle work, we built in turnaround time and process efficiency metrics and risk modeling to help the company identify troubled claims and begin to pare down the millions of dollars they were bleeding in missed processing deadlines and claim adjustments.

- **Analytics for automated adjudication improvements**. We developed complex data integration of compressed audit logs from the company's automated adjudication system, exposing the data to analysts—shortening their time to insight from days to minutes. We also offloaded an analytical workload for the initiative that took over 4 hours to run for a single region that executed in less that 2 minutes on the EDW for the entire company. This was a key initiative, because an improvement in 1% in their successfully auto adjudication rate would save them approximately $700,000 a month.

- **Paper to electronic claim performance monitoring and support**. The self-service and dashboard BI capabilities we developed were used by provider management areas to increase electronic claim submissions—paving the way for the company to save $11 million a year once their goal is reached.

- **More accurate IBNR (incurred but not reported) projections**. We responded quickly to develop a specific solution to aid the actuarial department to get more accurate and timely end-of-month claim inventory projections, which of course, had direct impacts on the amount to be held in reserves that were reflect in quarterly SEC 10-Q reports.